

Work Order ID 69665

Monday, May 16, 2011 9:19:29 AM

Page 1

Item ID: D206-642-341

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 5/16/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 6/3/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date: 11-05-14

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2650

F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels per PPP D206-642-341 CHG003

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Deburr Fwd edge of tube

2-Remove ridge on inside of Fwd edge of tube as per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

A/R ☐ Aluminum Rod ☐

4-Grind weld flush to cap on top surface only.

5-Cut aft end to length as per dwg D2650

6-Drill pilot holes using drill Jig DT8168A (A,& B) and DT8025. Open to Ø0.312"

7-Drill holes for wearplates using DT 8028-5. Open to Ø 0.297".

8-Open Aft Cap Hole using #6 Drill Bit

9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-5 Drilling Detail

10-Remove inner indexing ridge on aft end of skidtubes as per Dwg D2650

11-Deburr and Blow out all chips from inside the tube

DL 11/05/04
DL 11/05/04

M112800 / M117456 BE 11/06/01
BE 11/06/01

DL 11/06/02

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
115 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00						11-6-6	
120 Hand Finish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				✓		11/06/06	
125 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00						11-6-6	

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo	0.00							<i>WLV</i> <i>11/06/06</i>
	1-Open holes to finished size as per Dwg D2650, D2650-5 Drilling Detail (without cutting fluid)								
	2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid)								
	3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.								
	4-Bond D2654-5 web in place as per QSI 015Ensure holes line upAllow 12 Hrs. cure time before cutting Start Date: <i>11/06/06</i> Time: <i>3:50 PM</i> Finish Date: _____ Time: _____ A/R <input type="checkbox"/> Sikaflex-291 <input checked="" type="checkbox"/> <i>M 116948</i> Sikaflex expiry date: <i>12/01/15</i>								
140 QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							<i>1</i> <i>0</i> <i>316</i> <i>11/06/07</i>

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

A/R ☐ Aluminum Rod m112860

2-Grind welds flush as per Dwg D2650. Masking Tape access to inside of the Skidtube

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650Debur

4- Install nut plate as per dwg

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

BE 11/06/07
11-6-8
Sulablog

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Stop



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Cust Item ID:

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

215

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

11 11 16 16 1

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220



HandFinish

HandFinishing

0.00

Memo

0.00

Hand Finishing

1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R ☐ Sikaflex-291 ☐ M116040

Sikaflex expiry date: ☐ 11/08

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive

3-Install MS27039-4-06 Screw as per DEO 9153

4-Inspect for foreign object per QSI 024

5-Install D2646 Aft Cap and seal with SikaflexClean excess adhesive

A/R ☐ Sikaflex-291 ☐ M116040

Sikaflex expiry date: ☐ 11/08

6-Wing Walk as per Dwg D2650-5 and QSI 005 4.4

Batch: M117863

1 0 24 11/06/11

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/2011
mf
11-06-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Picklist Print

Monday, May 16, 2011 9:19:36 AM

Page 1

Work Order ID: 69665

Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube




Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: H 05.10.11 Added D3429-1 per CHG004 KJ/CP/JLM
IPP Rev: I 08-09-29 revF as per dwg DD verified by: EC Est Rev: J 09-03-02 as per DSI9440 rev.a DD verified by: EC IPP rev K 10.08.03 chg ms27039-1-08 for "C" type EC verified by DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN960JD416  Washer	NAS1149D0463J	Purchased	No				Each	0.0000	1				
CCR264SS3-3  Cherry Rivet		Purchased	No				Each	119.0000	2				
<div> <div> Location Loc Qty Loc Code </div> <div> FP-B 2 2 </div> <div> ST311 117 117 </div> <div> 113973 2 </div> <div> 117086 2 </div> </div>													
CR3212-4-03  Cherry Rivet		Purchased	No				Each	1,250.000	2				
<div> <div> Location Loc Qty Loc Code </div> <div> FP-B 12 12 </div> <div> ST311 1238 1238 </div> <div> 110139 2 </div> <div> 114859 2 </div> </div>													

117460



(x1) 41 46614

2

DP 11-6-8

2

DP 11-6-8

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Page 2

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Parent Item: D206-642-341

Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D2620

Manufactured: No

Each

11.0000

1



Skidtube, 206 Skidtube

Location

Loc Qty

Loc Code

LG

11

62684

3

68135

8

Each

38.0000

1

D2647

Manufactured: No



Cap

Location

Loc Qty

Loc Code

LG002

38

55352

38

Each

199.0000

19

D2649

Manufactured: No



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

85

68224

85

LG001

114

65317

1

68507

113

Each

1.0000

1

D2654-5

Manufactured: No



Web

Location

Loc Qty

Loc Code

LG

1

67675

1

70239

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Shop Packet Print

Page 2

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Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

D2680-041 Manufactured No

Each 19.0000 1



Nut Plate

Location	Loc Qty	Loc Code
ST020	19	
55366	19	

① DP 11-6-8

MS27039C1-08 Purchased No

Each 1,092.000 56



SCREW

Location	Loc Qty	Loc Code
FP-A	1	
116022	1	
ST293	1091	
115589	19	
116373	72	
117291	1000	

u u106116

ALS4-1032-130 Purchased No

220 Each 534.0000 54



Insert

Location	Loc Qty	Loc Code
ST281	534	
117331	534	

x56

54

u u106116

AN960C10L NAS1149C0332 Purchased No

220 Each 0.0000 54

R



washer

(38x) M117291
(16x) M117887

x54

54

x54 u u106116

AN960JD10L NAS1149D0332J Purchased No

220 Each 0.0000 2



Washer

M117291

2

(x2) u u106116

W/O:		WORK ORDER CHANGES					
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Start Date: 5/16/2011

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Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

220

Each

40.0000

1

1



Aft Cap



xl u106116

Location

Loc Qty

Loc Code

FP006

39

B68280

xl

62678

39

FP-4

1

69019

1

D2651-1

Manufactured No

220

Each

272.0000

14

14



Plug



xl u106116

Location

Loc Qty

Loc Code

fpa

121

69018

121

B70839

xb

FP-A

151

57869

7

66445

10

67263

12

67760

122

x8

D2651-3

Manufactured No

220

Each

600.0000

14

14



O-Ring



xl u106116

Location

Loc Qty

Loc Code

FP-A

600

61962

156

66956

444

x14

W/O:		WORK ORDER CHANGES					
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Required Date: 6/3/2011

Start Qty: 1.00


Required Qty: 1.00

D3535-11 Manufactured No 220 Each 10.0000 1 1

Wearshoe

Location Loc Qty Loc Code

FP019 10

68362 10

D3535-23 Manufactured No 220 Each 28.0000 1 1

Wearshoe


Location Loc Qty Loc Code

FP021 28

66236 2

67594 13

68342 13

D3535-35 Manufactured No 220 Each 19.0000 1 1

Wearshoe


Location Loc Qty Loc Code

FP018 19

65926 1

67598 8

68348 10

D3536-11 Manufactured No 220 Each 15.0000 1 1

Gasket

Location Loc Qty Loc Code

FP011 15

46649 1

46715 4

65574 10

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Shop Packet Print

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Start Date: 5/16/2011

Required Date: 6/3/2011



Start Qty: 1.00

Required Qty: 1.00

D3536-23	Manufactured	No	220	Each	21.0000	1	1
							<u>u1106116</u>
Gasket							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP011	21	
43406	1	
<u>66560</u>	20	

D3536-35	Manufactured	No	220	Each	15.0000	1	1
							<u>u1106116</u>
Gasket							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP012	15	
66237	3	
<u>67599</u>	12	

D3537-1	Manufactured	No	220	Each	38.0000	6	6
							<u>u1106116</u>
Wearpad							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP017	38	
63313	2	B69817
66804	32	
66935	4	

D3537-3	Manufactured	No	220	Each	11.0000	1	1
							<u>u1106116</u>
Wearpad							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP017	11	B69292
35697	1	
66230	10	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, May 16, 2011 9:19:38 AM

Page 7

Work Order ID: 69665



Parent Item: D206-642-341



Parent Item Name: Replacement Skidtube

Start Date: 5/16/2011

Required Date: 6/3/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

220

Each

65.0000

1

1



Screw



Handwritten: 115460

Location

Loc Qty

Loc Code

FP-A

30

115460

30

ST292

35

115460

35

Handwritten: 11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

W. J. J. J. J.
11-05-16

RELEASED
08-07-23

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	RMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW; INCORP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

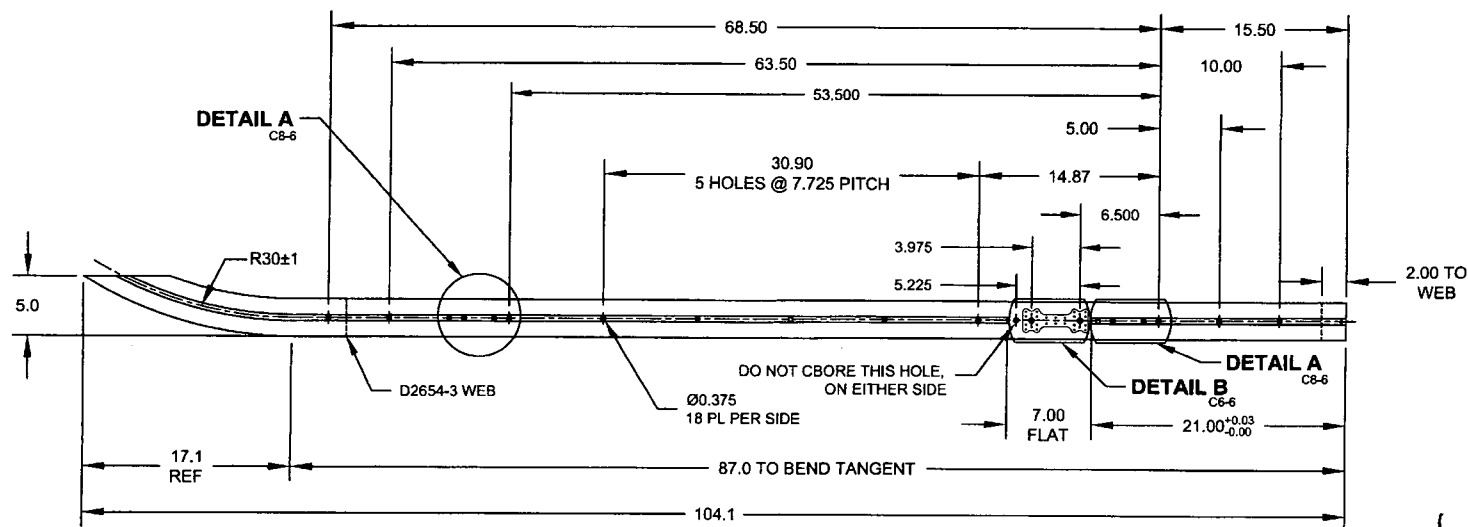
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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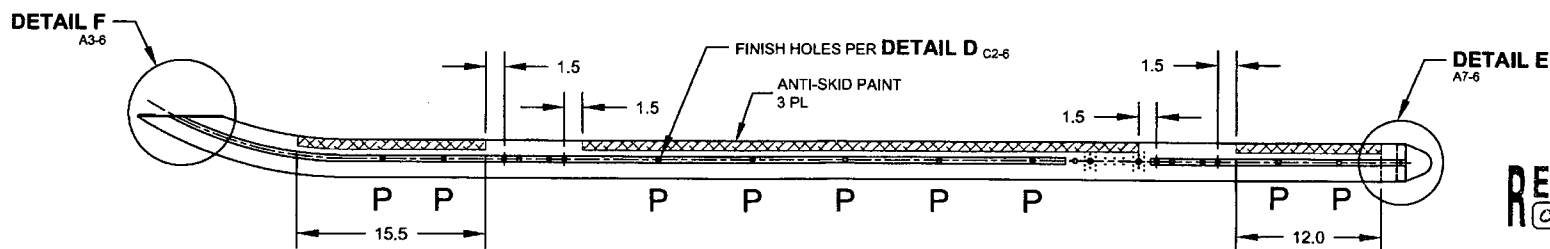
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2650-3 BENDING/DRILLING DETAIL

u to 44665



D2650-3 ASSEMBLY/FINISHING DETAIL

RELEASED
05 07 22 118

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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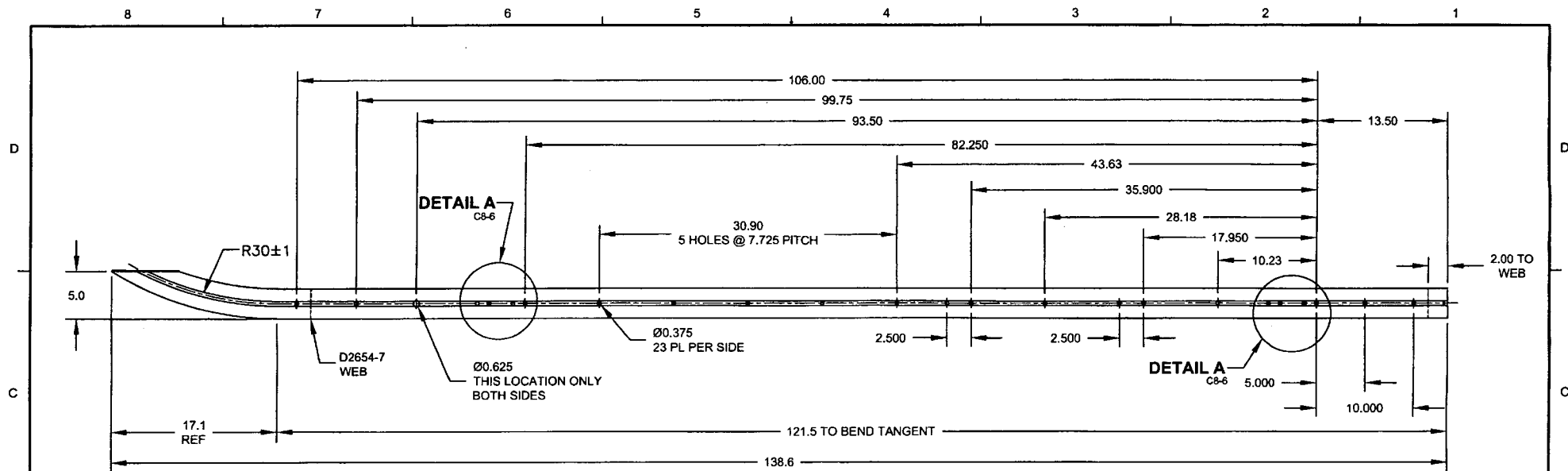
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

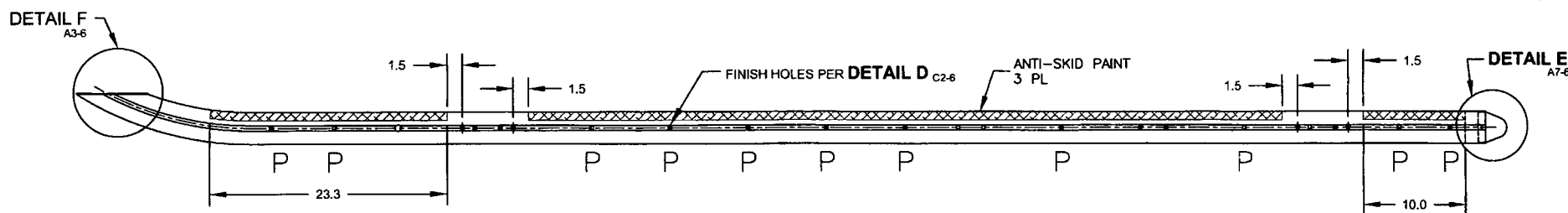
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2650-7 BENDING/DRILL DETAIL



D2650-7 ASSEMBLY/FINISHING DETAIL

DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 5 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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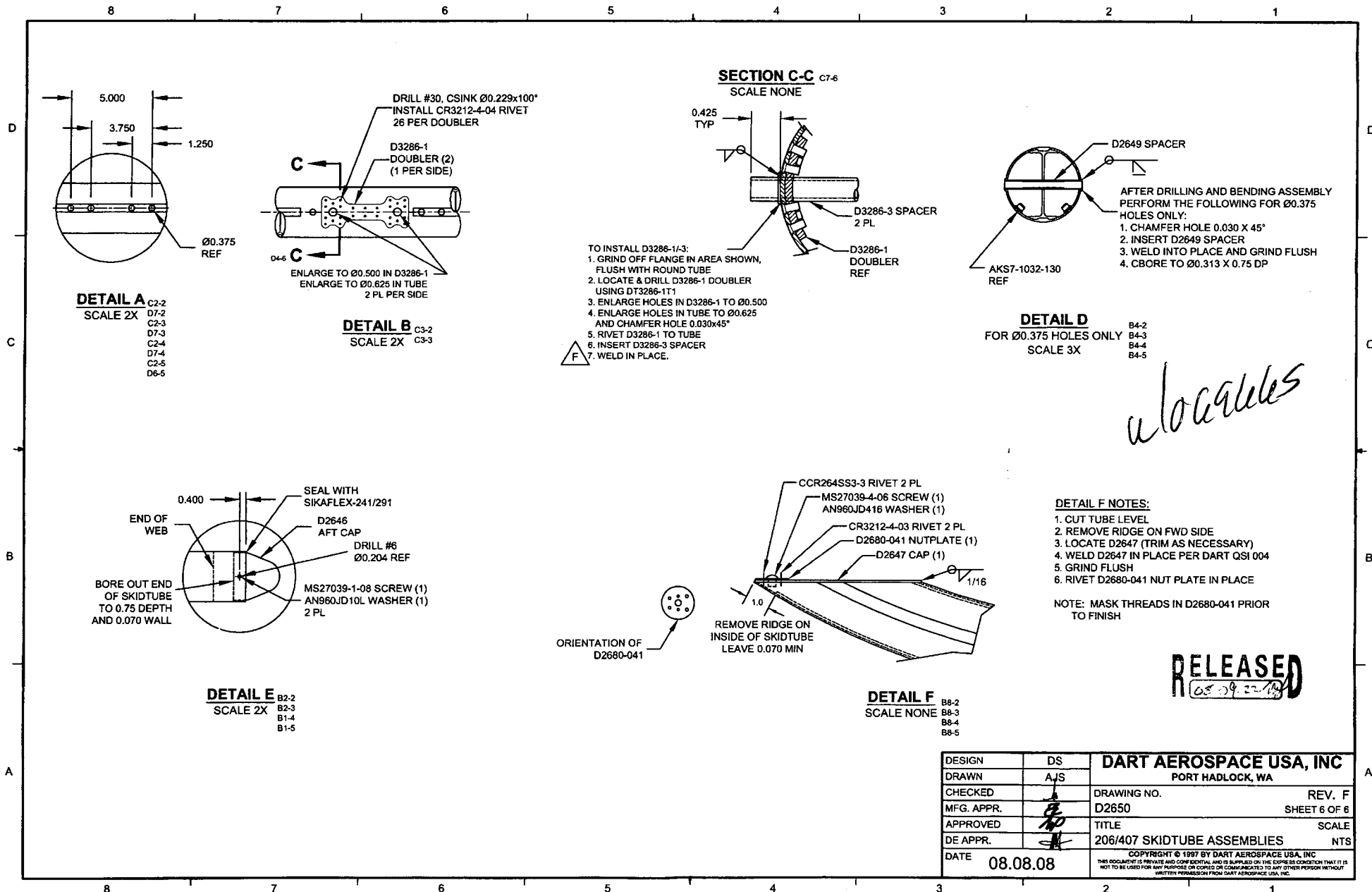
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NOTE: Date & initial all entries

NO. 252

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 66358
Part number: D206 642 541
Description: D206
Welding Process: Tig ☒ Mig ☐
Base material: Aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat Burns Date of Test Coupon 11-05-09

Welder Barclay Elliott Date of Test Coupon 11-05-09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld